

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-38. (Canceled)

39. (Original) A thermally powered control assembly for a VAV air diffuser comprising:

a movable damper member formed to extend across a supply air opening of the diffuser and movable relative thereto to vary the volume of supply air discharged from the opening; and

a damper position control device including a plurality of thermal sensor-actuators, and a movable linkage assembly operatively associated with the damper member and the sensor-actuators to transmit movement of the sensor-actuators to the damper member for displacement of the damper member to vary the volume of supply air discharged from the diffuser, all of the sensor-actuator elements and all of the movable linkage assembly being positioned on, and accessible from, a room side of the damper member while the diffuser is mounted in a supporting ceiling or wall.

40. (Original) The thermally powered control assembly as defined in claim 39, and an air flow directing structure including a room air induction channel positioned below the damper member and a supply air flow channel extending from an intake opening above the damper member to an outlet opening positioned for the discharge of supply air into the room air induction channel in a direction inducing the flow of room air along the room air induction channel; and

the plurality of thermal sensor-activators are provided by a room air sensor-actuator positioned for the flow of room air thereover and a supply air sensor-actuator positioned below the damper member for the flow of supply air thereover.

41. (Original) The thermally powered control assembly as defined in claim 40 wherein,

the air induction channel is provided by an inverted U-shaped member having an open downwardly facing side;

the room air sensor-actuator is positioned in the room air induction channel upstream of discharge of supply air into the room air induction channel, and the supply air sensor-actuator is positioned in the supply air flow channel.

42. (Original) The thermally powered control assembly as defined in claim 41 wherein,

the movable linkage assembly is formed to produce a changeover between a heating mode and a cooling mode when supply air changes between warm air and cool air;

the movable linkage assembly is formed to produce modulation of the volume of supply air discharged from the diffuser in both the heating mode and the cooling mode based upon the room air temperature sensed by a room air sensor-actuator; and

the linkage assembly is formed to provide a heating set point temperature and a cooling set point temperature which are independently adjustable.

43. (Original) The thermally powered control assembly as defined in claim 40 wherein,

the movable linkage assembly includes a lever having a damper driving portion and a sensor-actuator driven portion, the lever being mounted for pivoting about two spaced apart pivot points;

the thermal sensor-actuator assembly including a room air sensor-actuator mounted to engage the driven portion of the lever to pivot the lever about a selected one of the pivot points; and

the thermal sensor-actuator assembly including a supply air sensor-actuator mounted to displace the room air sensor-actuator to produce engagement of the driven portion of the lever for pivoting of the lever about one pivot point when cool supply air is sensed by the supply air sensor-actuator and for pivoting of the lever about the other pivot point when warm supply air is sensed by the supply air sensor-actuator.

44. (Original) A VAV air diffuser comprising:
a diffuser housing defining a supply air opening;
a damper member positioned in the housing and formed to extend across the supply air opening, the damper member being movably mounted by a plurality of roller elements for

movement relative to the supply air opening to vary the volume of supply air discharged from the opening; and

a damper position control device including an actuator operatively associated with the damper member to transmit movement of the actuator to the damper member for rolling displacement of the damper member to vary the volume of supply air discharged from the diffuser.

45. (Original) The VAV air diffuser as defined in claim 44 wherein, the actuator is provided by at least one thermal sensor-actuator and the damper member is mounted by the roller elements to a vertically extending member in the housing.

46. (Original) The VAV air diffuser as defined in claim 45 wherein, the vertically extending member is a supply air flow tube.

47. (Original) A thermally powered control assembly for a VAV air diffuser comprising:

a movable damper member formed to extend across a supply air opening of the diffuser and movable relative thereto to vary the volume of supply air discharged from the opening; and

a damper position control device including a plurality of thermal sensor-actuators, and a movable linkage assembly operatively associated with the damper member and the sensor-actuators to transmit movement of the sensor-actuators to the damper member for displacement of the damper member to vary the volume of supply air discharged from the diffuser, the damper linkage assembly including an adjustable minimum flow stop assembly causing the damper member to move to an adjustable closed position permitting discharge of supply air from the diffuser, the adjustable minimum flow stop assembly including a pivoted compound lever arm having a configuration which is adjustable from a room side of the damper member.

48. (Original) The thermally powered control assembly as defined in claim 47 wherein,

the compound lever arm is formed for adjustment of the angle of pivoting of the compound lever arm to adjust the position of the damper member in the closed position.

49. (Original) The thermally powered control assembly as defined in claim 48 wherein,

the compound lever arm includes an arm base member mounted for pivotal movement and driven by the sensor-actuators, a damper engaging arm member pivotally mounted to the arm base member, and a minimum flow adjustment member movably mounted for adjustment of the relative angle between the arm base member and the damper engaging arm member.

50. (Original) The thermally powered control assembly as defined in claim 49 wherein,

the compound lever arm includes at least one calibrated scale indicating the minimum flow produced by adjustment of the angle of the damper engaging arm member relative to the arm base member.

51. (Original) The thermally powered control assembly as defined in claim 50 wherein,

the compound lever arm includes a plurality of calibrated scales indicating the minimum flow produced by adjustment of the angle of the damper engaging arm member relative to the arm base member for a plurality of different supply air duct areas.

52-56. (Cancelled)